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(54) Title: HYDROGENATION OF POLYMERS IN THE PRESENCE OF SUPERCRITICAL CARBON DIOXIDE

(57) Abstract: A method of hydrogenating a polymer comprises: (a) providing a dense phase, the dense phase comprising a polymer in a solvent; (b) providing a catalyst system, the catalyst system comprising at least one metal hydrogenation catalyst (preferably including nickel or ruthenium); and (c) providing a light phase, the light phase comprising, consisting of or consisting essentially of hydrogen and carbon dioxide; and (d) contacting the dense phase, the light phase and the catalyst system under conditions in which the hydrogen reacts with the polymer and hydrogenates the polymer.